

HIGH-PERFORMANCE CMOS SOI DEVICES ON HYBRID CRYSTAL-ORIENTED SUB- STRATES

Abstract

Disclosed is an integrated circuit structure that has a substrate having at least two types of crystalline orientations. The first-type transistors are on first portions of the substrate that have a first type of crystalline orientation and second-type transistors are on second portions of the substrate that have a second type of crystalline orientation. The straining layer is above the first-type transistors and the second-type transistors. Further, the straining layer can be strained above the first-type transistors and relaxed above the second-type transistors.